

Energy Efficiency Programs- Commercial/Industrial

Energy FinAnswer

FinAnswer Express

Self-Direction

Recommissioning

\$12.7 million in 2009



Energy Efficiency Programs- Residential

Home Energy Savings

Cool Cash

See Ya Later Refrigerator

ENERGY STAR New Homes

Cool Keeper

\$29 million spent in 2009





SUSTAINABILITY



Product Take Back	\$ 15 M
Energy & Water Efficiency	269 K
Waste Reduction & Recycling	400 K
Greening Our Supply Chain	586 K
Employee & Community Involvement	202 K
Total Annual Savings	\$ 16.46 M

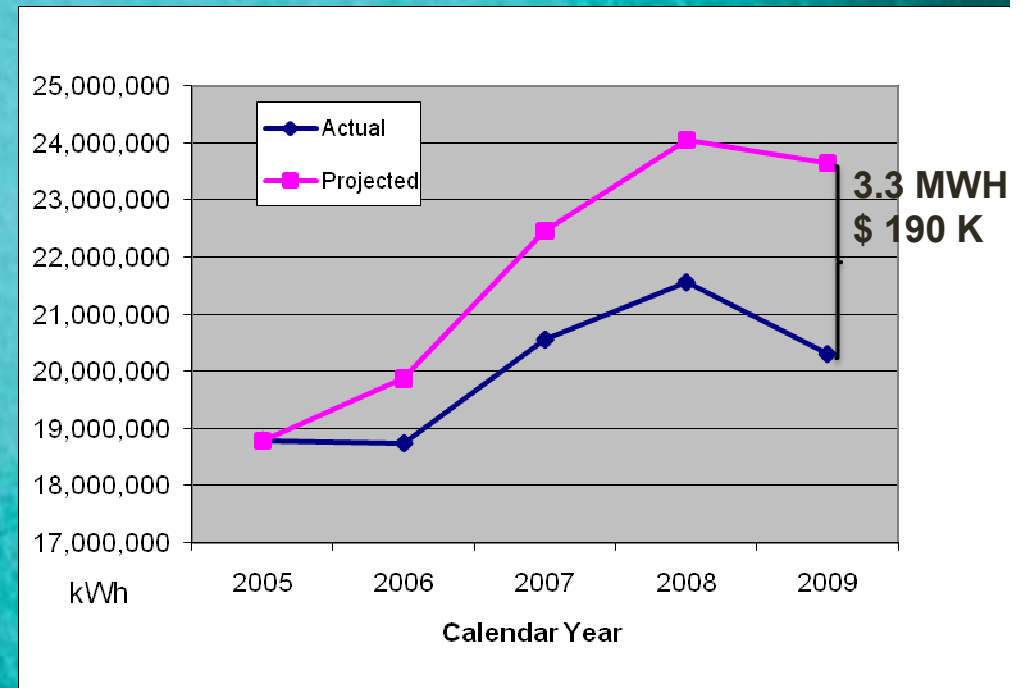
ENERGY & WATER EFFICIENCY



Initiatives Since 2005

Electricity	\$ 190 K
Natural Gas	74 K
Water	5 K
Annual Savings	\$ 269 K

Electrical Savings



Efficiency Projects

- Process Equipment
 - Industrial water pumps
 - Continuous annealer removal
 - Furnace cooling water bypass
- Lighting Projects
 - Changing all lights to T-8 florescent
 - New lighting layouts and fixtures to reduce wattage
 - Group re-lamping from 32 w to 28 w
 - Time clock & Motion Sensors
- HVAC
 - High efficiency units
 - Retro commissioning
 - Variable Frequency Drives
 - Building Automation System

Incentive Programs

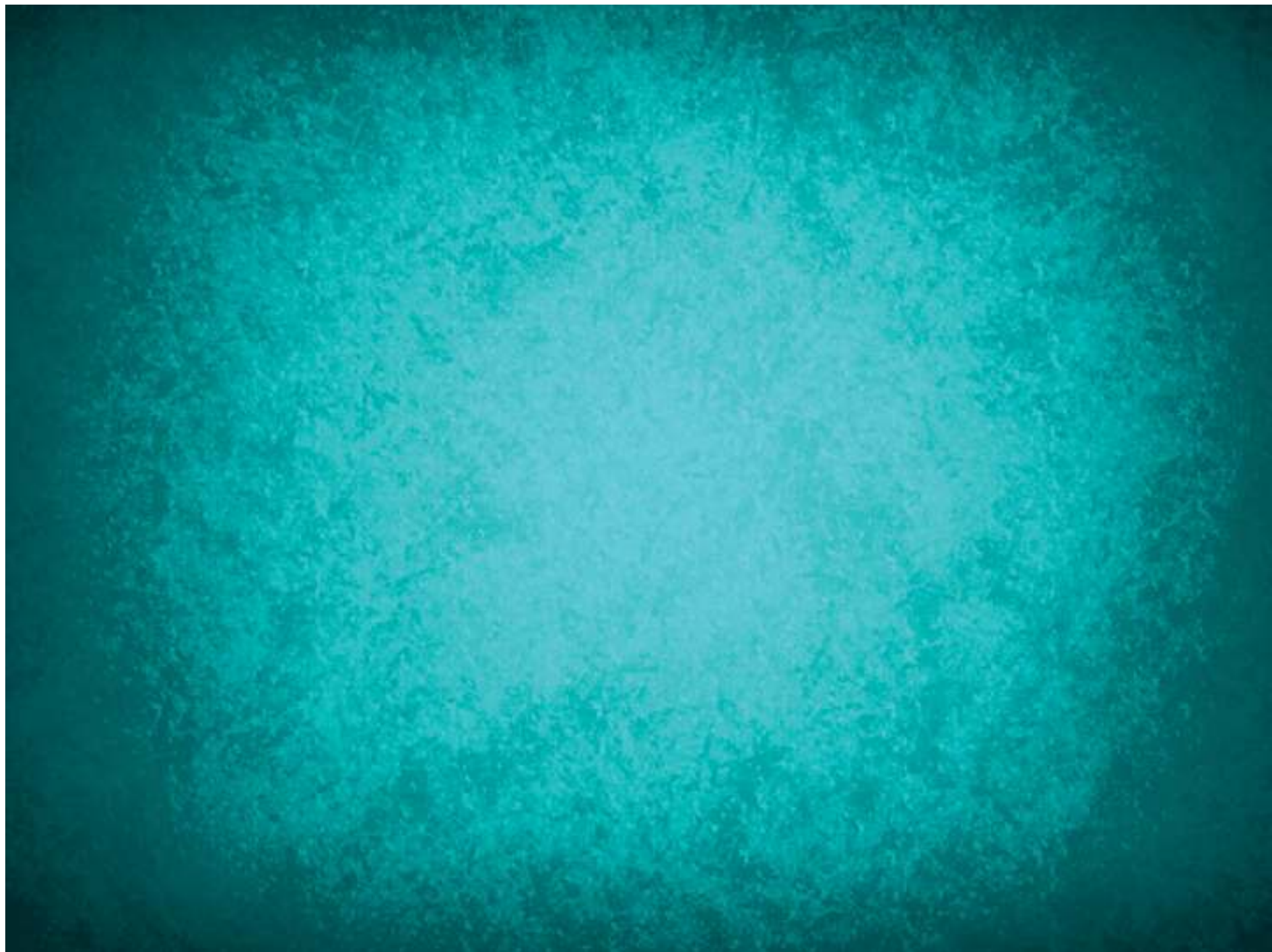
- Rocky Mountain Power
 - FinAnswer & FinAnswer Express
 - ReCommissioning
 - Self Direct
- Questar Thermwise
 - Weatherization
 - Equipment



Just Do It



- Contact Utility Providers
- Conduct outside and internal audits
- Budget the goal not the project – this will lead to the projects
- Pick the low hanging fruit – projects with the fastest payback



The Boyer Company

- Developed more than 24 million square feet of commercial buildings across the country
- Currently manages 14 million square feet of commercial property

Experience:

- Roger Boyer and team have been developing in Utah, Western U.S. and around the country for 37 years.
- A collection of over 40 seasoned project managers, construction managers and property managers.
- Notable project: One Utah Center – 24 Story, 419,000 SF class A office building

Market Overview

Commercial Real Estate

- Development portfolio includes: Class A Offices, MOBs, Government Facilities, Retail, Industrial, Warehouse Industrial Properties.
- Tenants
 - Local & National
- Trends
 - Energy costs continue to increase
 - We along with tenants continue to search for ways to reduce operating costs.
 - Sustainability movement
 - Corporate policy
 - Public policy – Tax incentives

Market Issues

- “First Cost” Investment vs. Pay back on lower operating costs
- Prospective tenants shopping lease rates and operating costs
- Sustainability

The Boyer Company

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Applying Energy Efficiency for Business Expansion and Retention

By Parsons Behle & Latimer



Renewable Energy Business Summit – November 15, 2010

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Energy Efficiency Benefits Industry

- Industries operate in competitive markets
- Product prices are set in the market
- Profit = Product Sales Price – Cost
- Efficiencies reduce costs to increase profits
- Energy is large cost component and must be managed
- Cost effective energy efficiency actions reduce costs and improve competitiveness



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Incentives

- Demand Side Management
 - Promotes energy efficiency, conservation, more efficient management of electric loads
 - Self Direction Credit
 - Re-Commissioning Program
 - Energy Efficiency Incentives
- Renewable Energy Source
 - DSM measures
 - Waste-gas or waste-heat capture or recovery systems
 - Eligible for renewable energy credits



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Proven Examples

- Improved communications running pressure oxidation facility
 - 13,739,303 kWh/yr
- Installation of optimization software for pressure oxidation facility
 - 8,150,086 kWh/yr
- Oxygen compressor management program
 - 3,716,590 kWh/yr
- Reduced power draw on mill drive motors
 - 6,187,101 kWh/yr
- Others:
 - Higher efficiency lighting, motors, pumps
 - Variable speed motors
 - Smart metering on major energy-using processes
 - Combined waste-heat and power systems



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DATA CENTER EFFICIENCY

What to do right now!

DEAN NELSON
Sr Director, Global Datacenter Services

\$2,000 worth of goods
traded every second

A major appliance is sold
every minute

A pair of shoes is sold
every 9 seconds

A cell phone is sold every
6 seconds



Its all about scale...

- **Worldwide...**

- We are in 32 countries, in Seven languages, 24xForever

- **Extreme Scale...**

- Over 90 million active users worldwide
- Over 260 million items for sale in 50,000 categories
- Over 93 billion database calls per day
- We store 50TB of new incremental data daily

- **Extreme Agility...**

- Hundreds of new features per quarter
- We roll code to site daily
- Roughly 10% of items are listed or ended everyday



Green Field Data Center

- **Mandate efficiency as a project requirement**
 - Efficiency mandate starting with the RFP
 - Be an “ACTIVE OWNER” and drive the implementation
- **Result: 50% lower operating expense**



Existing Data Centers

- **Implement Best Practices**

- Blanking Panel Program
- Return Air Management
- Hot/Cold Aisle Containment
- Operational Best Practices
- UPS Module Rotation
- Lowered Cooling Tower Setpoint
- Lighting Control

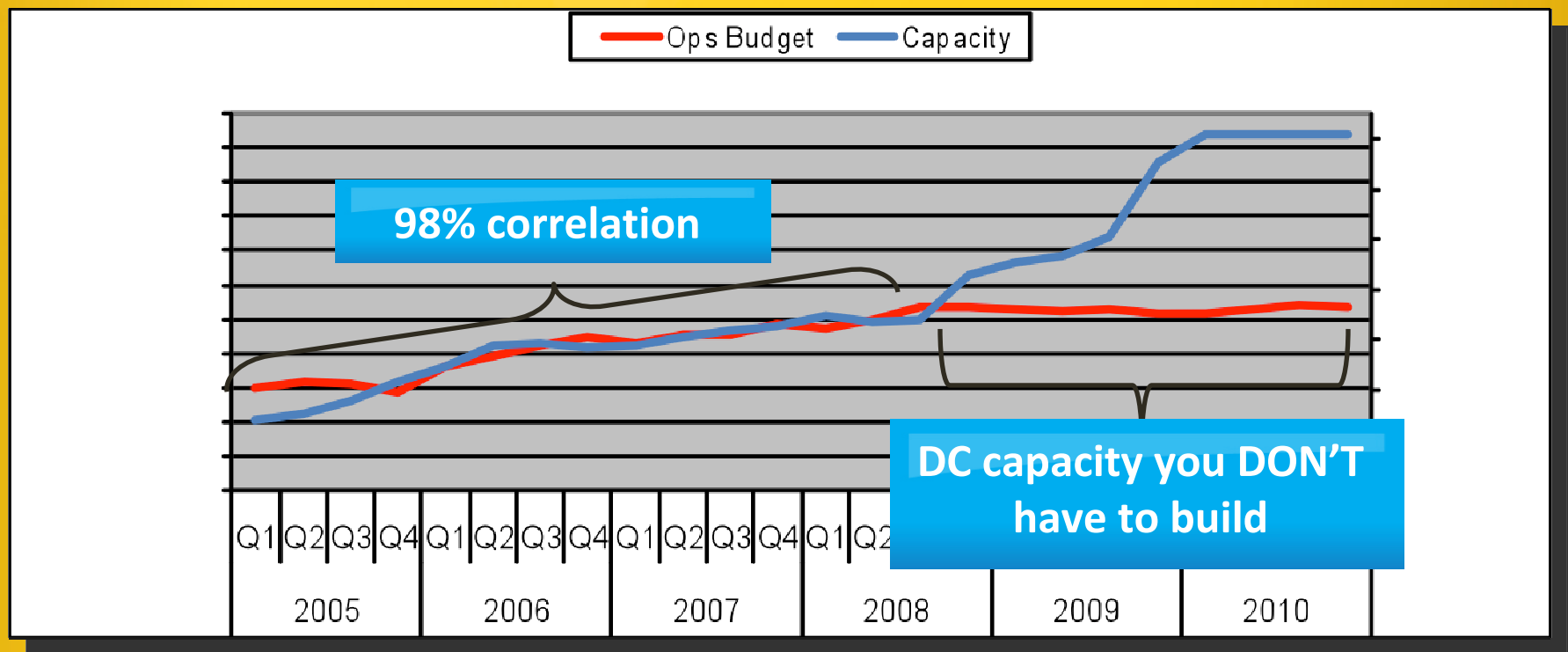


- **Result: 19% PUE reduction**

- Achieved during 50% IT growth
- \$300,000 rebate awarded this week

Broke the relationship between growth & cost

The most efficient (cost + energy + flexible) infrastructure and data center is the one you don't have to build



We figured out our “miles per gallon” calculation

